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OUTLOOK

September 1990

A Monthly Forecast for the Economy and Real Estate

FORECAST SUMMARY

- The economic expansion remains on its knees -- down but not out. The first reports covering the period since the Persian Crisis broke out show a slowing economy: down in August were industrial production, capacity utilization, and retail sales. Among the economic variables up during August: long-term interest rates and consumer and producer prices.
- The current NAR forecast calls for a mild recession beginning in the fourth quarter of 1990. By the third quarter of 1991, a modest recovery will have begun. In terms of annual rates, the economy is expected to grow 1.1 percent in 1990 and show no growth in 1991. Growth will resume at a 2.4 percent rate in 1992. This compares to a 3.9 percent average for economic growth between 1982 and 1989.
- Housing starts continued to struggle in July, falling for the tenth time in the past twelve months. The annual rate for July was 1,148,000 units, the lowest level since the end of the last recession in October 1982. The figure was 19.4 percent below the July 1989 start rate. Housing starts are expected to reach bottom during the fourth quarter of 1990, when the rate of starts is projected at 1,134,000 units.
- The rate of new homes sold declined 2.3 percent in July and stood at only three-quarters of the rate of sales in July 1990. This marks the ninth month in the past year that the sales rate has fallen. Sales of existing homes, meanwhile, put together back-to-back monthly sales gains for the first time in almost a year. In July, the sales rate grew 3.3 percent.
- While the housing market is in a slump, it isn't moribund. Both the Northeast and the South reversed decreases in the existing homes sales rate in July by picking up 14.3 percent and 6.9 percent, respectively. The South's 1,400,000-unit annual rate during July was stronger than the region's annual rates in both 1988 and 1989. The West, however, was about 16 percent off in July from its 1989 performance.

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Forecasting & Policy Analysis Division
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Applied Astrology

by
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Economic forecasting used to be so easy. For most of the Eighties, you put the machine on automatic pilot, called for continued growth, moderate inflation and marginal changes in interest rates, and hit the golf course. Now it's *work*. Until the events in the Gulf clarify, until the budget summiteers come down from the mountain, and until the Fed makes up its mind about whether it's fighting inflation or recession, any forecast is more religion than science. Astrology comes from the East, and the events in the Middle East have made economists revert to being astrologers.

Clearly, the future of this economy will depend significantly on the resolution of our face-off with Iraq. In the most probable case, we will be involved in a protracted stalemate that will tie up resources in maintaining a desert presence. Oil prices will stabilize in the $25-30 range, pushing inflation up and growth down. Even increased military spending will be insufficient to avert recession. The disaster scenarios--in both human and economic terms--involves a fully shooting war that doubles oil prices and spawns a deep and prolonged recession.

But the oil shock only sets the stage. The severity and duration of the coming recession--in fact, if it comes at all--depend on how public policy, monetary and fiscal, operate. The budget summiteers from Congress and the Administration retired to Andrews Air Force Base and returned with a plan to move the deficit closer to the Gramm-Rudman targets. Implementation will be difficult because of the slowing economy; in fact, the deeper the deficit cuts, the deeper and more probable is recession. But ultimately, that is the best policy. If this economy is to recapitalize in the Nineties, the oppressive weight of Federal debt must be removed from the financial market.

The Federal Reserve faces a similar, if more delicate, dilemma. Easing monetary policy could avert a recession that it desperately wishes to avoid. But doing so will ratify higher oil prices into higher inflation rates which the Fed also wants to avoid. Added into this mix is the fact that the continued attraction of the foreign capital on which we have come to depend requires higher interest rates and thus tight money. The experience of the Eighties suggests that in the long run dropping the inflation rate produces a stronger economy than leaning against recession. The Fed knows this and will act accordingly, easing only slightly to mitigate the severity and duration of recession while avoiding the loss of foreign capital and exploding inflation.

The final determinant of events is the length of time the banking system and its regulators continue to view real estate as an investment to avoid. On the heels of the thrift crisis, bank regulators labelled construction and development lending as excessively risky. Banks took the message, and the example of their thrift brethren, to heart, and cut back significantly on real estate lending. The result has been a general inability of builders and developers to obtain the credit necessary to undertake projects. And this shows up in plummeting housing starts and an increasing squeeze on viable commercial real estate developments.

This, too, is economic policy. It's not taxes or spending--like fiscal policy--and it's not control of monetary growth. Rather it's the allocation of credit by persuasion, something generally termed "jawboning." Policy makers--in this case bank regulators--are channelling credit away from real estate by an implicit use of regulatory authority. When the examiners hit a bank and force a general write-down of real estate loans because "the market is declining," the word spreads and it's not necessary to repeat the process at a second institution. In the biblical story, Samson slew the Philistines with the jawbone of an ass; now the ass is wielding the jawbone.

So the forecaster is in a quandary. Besides the potential for war and peace in the Gulf, three major policy questions cloud the economic outlook. How the answers to these questions evolve will tell us if we can avert recession, and if not, how deep the slump will be. Oh, for the good old days of the late Eighties when economic prognostication was so secure. To paraphrase the Eagles:

My, oh my, you sure know how to arrange things
You planned it all so well, so carefully
Funny how you know life didn't change things
You're still the same old gang you used to be.

Outlook for the Economy and Real Estate

The economic expansion remains on its knees -- down but not out. The referee's count can be heard in the gloomy economic reports released recently, such as August's declines of 0.2 percent in industrial output and 0.6 percent in retail sales. Consumers and investors remain uncertain about government fiscal policy and oil prices, which have topped $33 on the spot market.

Although good news from either arena may allow the economy to avert a recession, growth is going to remain well below trend over the next few quarters. The current NAR forecast calls for a mild recession beginning in the fourth quarter of 1990 and ending the following quarter. After these two quarters of negative growth, zero growth is expected in the second quarter of 1991. By the third quarter, a modest recovery will have begun. In terms of annual rates, the economy is expected to grow 1.1 percent in 1990 and show no growth in 1991. Growth will resume at a 2.4 percent rate in 1992. As a point of comparison, growth between 1982 and 1989 averaged 3.9 percent.

If Not a Recession, Then a Recessionary Climate

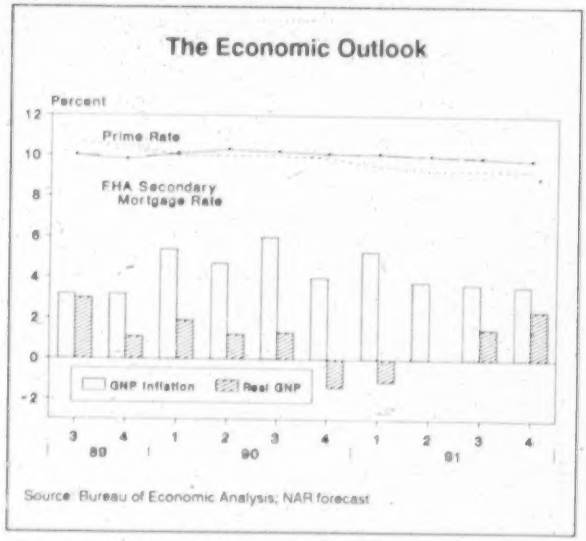
Although the numbers presented in this *Outlook* are a bit harsher than those of last month, the underlying story has not changed: The economy is stringing together several quarters of extremely slow growth. In fact, growth in some of those quarters is likely to be negative. No matter whether the official statistics place the economy in a recession or not, the current economic climate feels like a recession to many regions, industries, and individuals.

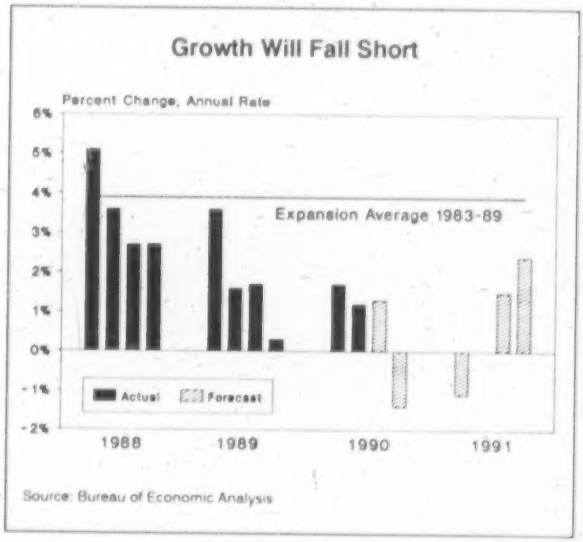
The problems with the economy are not rooted in the Persian Gulf crisis. Many important economic figures were showing fatigue before the Iraqi invasion: Export growth was slowing, consumer spending was down, and housing was slumping. Nevertheless, Saddam Hussein's actions have gravely imperiled whatever chances the economy has of skirting a recession.

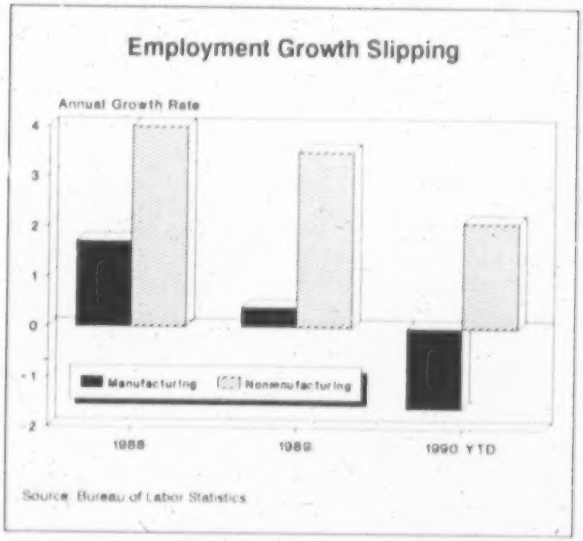
Employment Growth Continues to Slide

Job losses in manufacturing industries continued in August with 45,000 more workers placed off manufacturing payrolls. Since January 1989, this sector has shed 456,000 jobs and, year-to-date, employment is falling at a 1.6 percent annual rate. Employment in services has not been spared as growth has been cut in half over the past two years. In 1988, employment in private nonmanufacturing industries -- such as transportation, finance, communications, retail sales, health services -- rose by 4.0 percent. So far in 1990, job growth has come at only a 2.1 percent annual rate. Falling job growth pulled up the unemployment rate in August to 5.6 percent, up from 5.2 percent in June.

Consumers appear to be keeping their spending in check. The University of Michigan's index of consumer expectations, which had spent most of 1990 in the mid-80s, plunged to 62.9 in August from July's 77.3 level. Credit card debt rose a robust $3.8 billion in July, but about half of that may have been interest rate charges as households found it more difficult to pay off their outstanding balances. Nevertheless, auto sales held up well during the first ten days of September.







Long-Term Rates Up to Cover Inflation Risk

The jump in oil prices has been traced out by a jump in long-term interest rates, as shown on the chart at the right. While contract oil prices are expected to remain in the $25 per barrel range, interest rates are expected to ease as economic weakness becomes more pervasive. The yield curve chart at the middle right shows how yields have changed along the spectrum of maturities on government bonds since the Iraqi invasion. Two yield curves are shown: one which shows June's averages for eight different maturities, and another which shows the averages for the week ending September 14. Short-term interest rates have fallen while rates on longer-term obligations have risen. This dichotomy is due to increased demand for short-term instruments as stock market prices fall and uncertainty about the health of the economy rises. Yields, meanwhile, have risen on long-term instruments since they are much more vulnerable to inflation. The increase in the long-term bond yield is a measure of the extra return required in the face of higher inflation. By the first quarter of 1991, both long- and short-term rates are expected to fall relative to their current positions.

Mortgage rates, consequently, have also risen over the past six weeks despite the weak housing market. At the end of July, rates on 30-year conventional mortgages stood at 9.98 perecent; by mid-September the rate stood at 10.13 percent. After staying close to the 10 percent range during most of 1991, rates are expected to average 9.5 percent in 1992.

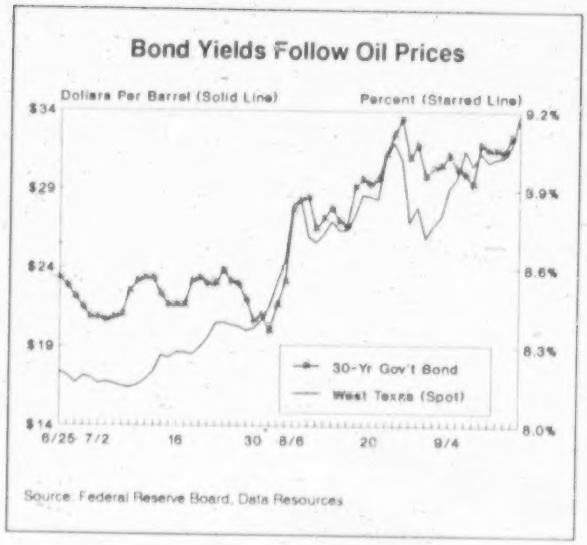
The First Jump in the Inflation Data

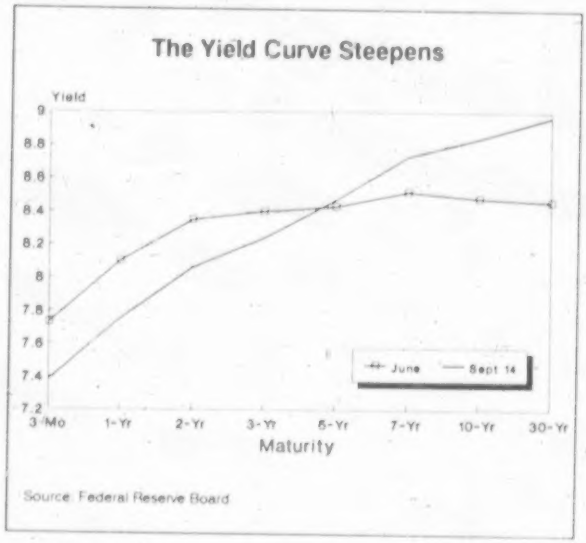
The Producer Price Index rose sharply in August, as expected. The monthly change from July was 1.3 percent, or 16.8 percent at an annual rate. The initial impact to the price system of higher oil prices was recorded in the Crude Materials component of the PPI. Here, at the epicenter of the price shock, prices were up almost 10% for the month. These higher prices are feeding through to other areas, and consequently the next several PPI and Consumer Price Index reports will be unpleasant.

The short-term outlook for inflation depends largely upon the course of oil prices. With a weak economy and monetary policy aimed at containing inflation, double-digit inflation is not expected. The steepest quarterly rise in the CPI over the forecast horizon is 7.3 percent during the fourth quarter of 1990.

Fiscal and Monetary Policies In A Stalemate

Government policy, meanwhile, has been gridlocked. With an eye on the inflation numbers, the Federal Reserve is reluctant to loosen monetary policy until, as Chairman Greenspan put it, "a credible, long-term, enforceable budget agreement" is enacted. Yet the budget negotiators appear to be making little progress, even under the shadow of automatic spending cuts to go into effect on October 1. The outlook assumes that the conferees agree on a $25 billion deficit-reduction package -- only half of their stated goal, but enough to keep the government running full-time. With the Fed waiting for the Administration and Congress before easing monetary policy, the risk of a recession grows.





HOUSING STARTS

(Seasonally Adjusted Annual Rates, in Thousands)

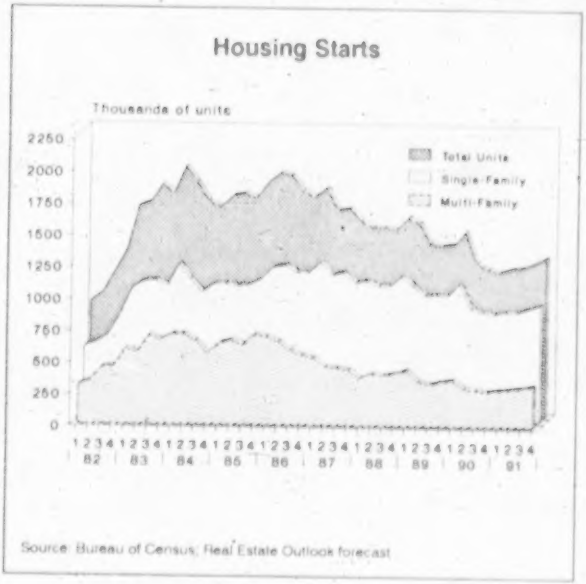
National Data

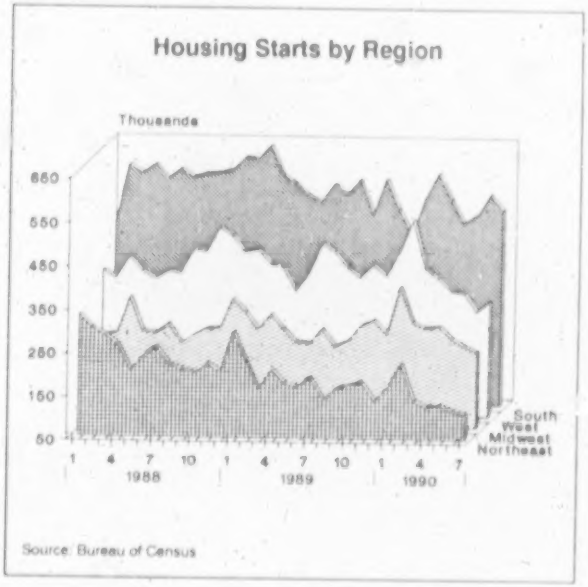
	Total	SF	2-4	5+
Jul 1989	1,424	1,029	58	337
Mar 1990	1,307	996	35	276
Apr 1990	1,216	898	53	265
May 1990	1,206	897	36	273
Jun 1990	1,179	885	37	257
Jul 1990	***1,148***	***873***	***32***	***243***
Annual Averages:				
1988	1,488	1,081	59	348
1989	1,376	1,003	55	318
Percent Changes in July 1990 since:				
Jul 1989	-19.4	-15.2	-44.8	-27.9
Jun 1990	-2.6	-1.4	-13.5	-5.4

Regional Data

	Northeast	Midwest	South	West
Jul 1989	190	276	531	427
Mar 1990	139	280	520	368
Apr 1990	124	284	469	339
May 1990	127	256	487	336
Jun 1990	114	238	534	293
Jul 1990	***108***	***225***	***498***	***317***
Annual Averages:				
1988	243	274	574	405
1989	184	272	537	396
Percent Changes in July 1990 since:				
Jul 1989	-43.2	-18.5	-6.2	-25.8
Jun 1990	-5.3	-5.5	-6.7	8.2

Source: Bureau of the Census; Construction Reports, Series C20


Housing Starts
Thousands of units
2250
2000
1750
1500
1250
1000
750
500
250
0
Total Units
Single-Family
Multi-Family
1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4
82 83 84 85 86 87 88 89 90 91
Source: Bureau of Census; Real Estate Outlook forecast



Housing starts continued to struggle in July, falling for the tenth time in the past twelve months. The annual rate for July was 1,148,000 units, the lowest level since the end of the last recession in October 1982 and 19.4 percent below the July 1989 figure. This follows the second quarter's rate of 1,200,000 units, which itself was a steep 17.4 percent decline from the first quarter's rate.

Housing starts are projected to reach bottom in the fourth quarter of 1990 at a 1,134,000 annual rate. Slightly lower interest rates, largely a result of the slumping economy, should give a modest boost to housing starts during 1991. By the fourth quarter of 1991, starts should be at a 1,254,000-unit pace, and economic recovery in 1992 is expected to spur housing starts to 1,332,000 units.

Multi-family units continue to bear the brunt of the decline in housing starts. In July, multi-family units were started at a 275,000-unit annual rate, 30 percent below the rate in July 1989. The current NAR forecast calls for multi-families to reach its nadir in the fourth-quarter of 1990 with a 284,000-unit rate. This would place multi-families below the low point reached during the last recession.

During July, all four regions remained below their rates for housing starts of one year ago. The biggest decline was recorded by the Northeast, down 43.2 percent. Only the West posted an increase in June relative to May, gaining 8.2 percent after a 12.8 percent loss the month before.

NEW HOME SALES

(Seasonally Adjusted Annual Rates, in Thousands)

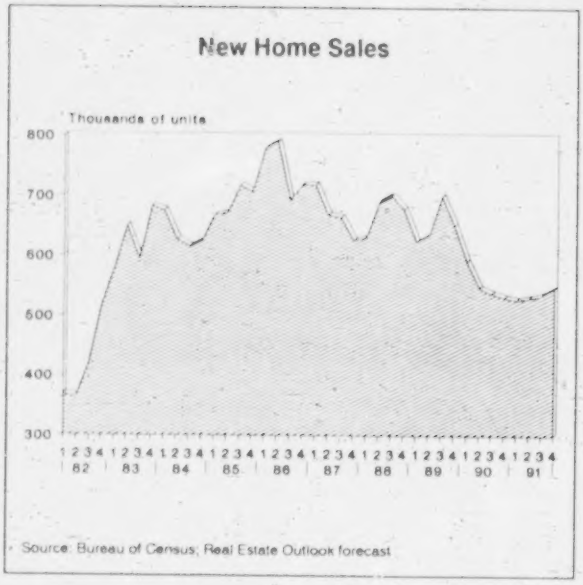
National Data

		Mo. Ago % Chg.	Yr. Ago % Chg.
Jul 1989	741	14.7	5.7
Aug 1989	719	-3.0	1.0
Sep 1989	638	-11.3	-7.7
Oct 1989	636	-0.3	-11.4
Nov 1989	687	8.0	5.7
Dec 1989	633	-7.9	-5.4
Jan 1990	613	-3.2	-12.9
Feb 1990	606	-1.1	-2.7
Mar 1990	558	-7.9	0.4
Apr 1990	533	-4.5	-12.6
May 1990	536	0.6	-17.7
Jun 1990	561	4.7	-13.2
Jul 1990	***548***	***-2.3***	***-26.0***
Annual Averages:			
1988	676		0.8
1989	654		-3.3

Regional Data

	Northeast	Midwest	South	West
Jul 1989	103	127	281	229
Jan 1990	94	104	226	189
Feb 1990	68	84	265	189
Mar 1990	84	94	221	159
Apr 1990	86	90	209	148
May 1990	71	93	215	157
Jun 1990	89	94	237	142
Jul 1990	***80***	***96***	***237***	***135***
Annual Averages:				
1988	101	98	271	206
1989	90	103	258	202
Percent Changes in July 1990 since:				
Jul 1989	-22.3	-24.4	-15.7	-41.0
Jun 1990	-10.1	2.1	0.0	-4.9

Source: Bureau of the Census; Construction Reports, Series C25



The rate of new homes sold declined 2.3 percent in July and stood at only three-quarters of the rate of sales in July 1990. This marks the ninth month in the past year that the sales pace has fallen. During the second quarter, new homes were sold at a 543,000-unit annual rate, 8.2 percent below the first quarter's rate.

For the next few quarters, uncertainty about the economy will dampen new home sales activity. The pace is expected to drop to 524,000 units during the second quarter of 1991 before recovering somewhat to 534,000 units in the fourth quarter. The annual figure for 1991 is projected to be 528,000 units, almost 20 percent below the 1989 figure. Although 1992 will be a year of recovery, the annual rate will stand 16 percent below the 1989 figure.

The Northeast's big increase in June, initially estimated at 40 percent, was scaled back to 25.3 percent, according to revised figures. The spurt of activity was unsustained in July, when the pace slipped 10.1 percent below June's rate. The sales rate in the Midwest gained ground in July, improving 2.1 percent over June. Meanwhile, the sales rate held even in the South and dipped almost 5 percent in the West.

Compared to the first seven months of 1989, all four regions recorded significant declines in sales activity through the first seven months of 1990. The West fell the furthest, down 19 percent. The Northeast was down 12 percent during the same period, the Midwest was down almost 11 percent, and the South was off by 9 percent.

EXISTING SINGLE-FAMILY HOME SALES

(Seasonally Adjusted Annual Rates, in Thousands)

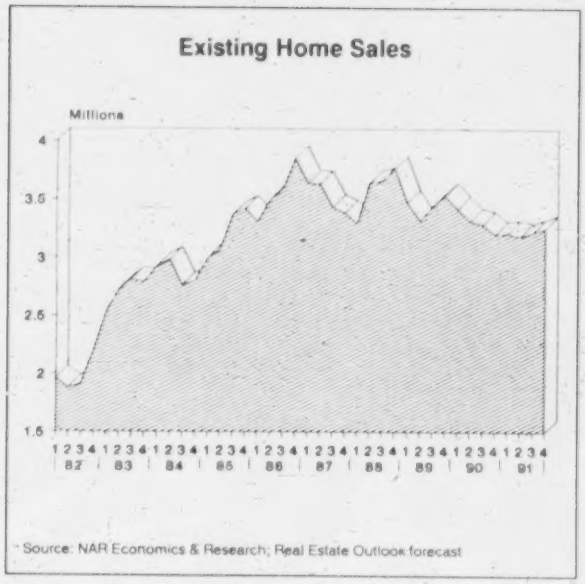
National Data

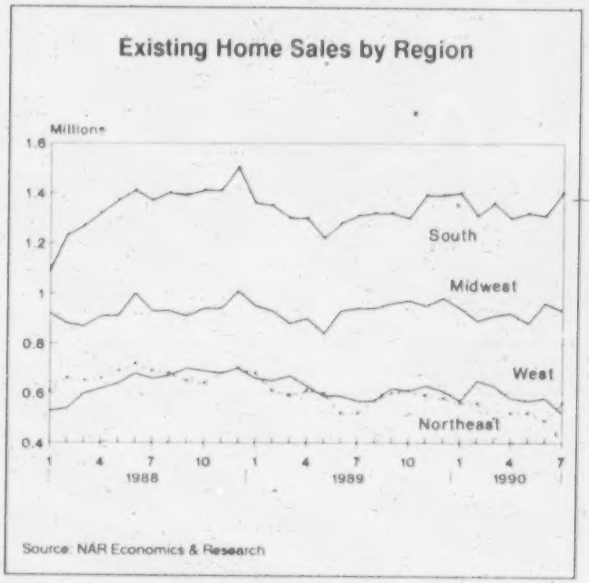
		Mo. Ago % Chg.	Yr. Ago % Chg.
Jul 1989	3,380	1.5	-7.4
Aug 1989	3,440	1.8	-6.8
Sep 1989	3,510	2.0	-3.8
Oct 1989	3,490	-0.6	-5.2
Nov 1989	3,560	2.0	-4.0
Dec 1989	3,560	0.0	-9.2
Jan 1990	3,470	-2.5	-5.2
Feb 1990	3,400	-2.0	-4.2
Mar 1990	3,400	0.0	-0.9
Apr 1990	3,330	-2.1	-3.2
May 1990	3,300	-0.9	1.5
Jun 1990	3,330	0.9	0.0
Jul 1990	***3,440***	***3.3***	***1.8***
Annual Averages:			
1988	3,594		-1.9
1989	3,467		-3.6

Regional Data

	Northeast	Midwest	South	West
Jul 1989	520	940	1310	570
Feb 1990	560	890	1310	650
Mar 1990	500	910	1360	630
Apr 1990	520	920	1300	580
May 1990	520	880	1320	570
Jun 1990	490	960	1310	580
Jul 1990	***560***	***930***	***1400***	***520***
Annual Averages:				
1988	669	929	1348	643
1989	590	931	1320	617
Percent changes in July 1990 since:				
Jul 1989	7.7	-1.1	6.9	-8.8
Jun 1990	14.3	-3.1	6.9	-10.3

Source: Bureau of the Census, Construction Reports, Series C25


Existing Home Sales
Millions
4
3.5
3
2.5
2
1.5
1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4
82 83 84 85 86 87 88 89 90 91
Source: NAR Economics & Research; Real Estate Outlook forecast



For the first time since September 1989, the sales rate for existing homes posted back-to-back gains in July. The 3.3 percent increase followed June's 0.9 percent gain, leaving July's rate at 3,440,000 units. This placed sales 1.8 percent ahead of last July's figure of 3,330,000 units. During the second quarter, the rate dipped about 3 percent from the first quarter's rate.

Despite these modest gains, existing home sales have not hit bottom, according to the NAR forecast. The sales pace is expected to hit 3,189,000-units during next year's second quarter before staging a modest but sustainable recovery. Jitters about the health of the U.S. economy will lead homebuyers to remain cautious throughout the remainder of 1990. As the economy recovers from the mild recession and enjoys lower interest rates, existing home sales are expected to slowly revive. In 1991, sales are expected fall 2.7 percent from 1990. In 1992, sales are projected to grow 3.4 percent.

While the housing market is in a slump, it isn't moribund. Both the Northeast and the South reversed decreases in the sales rate in July by picking up 14.3 percent and 6.9 percent, respectively. The South's 1,400,000-unit annual rate during July was stronger than the region's annual rates in both 1988 and 1989. The Midwest's July rate just matches that of the two previous years. The West, however, was about 16 percent off in July from its 1989 performance.

SINGLE-FAMILY HOME PRICES

(In Dollars)

National Data

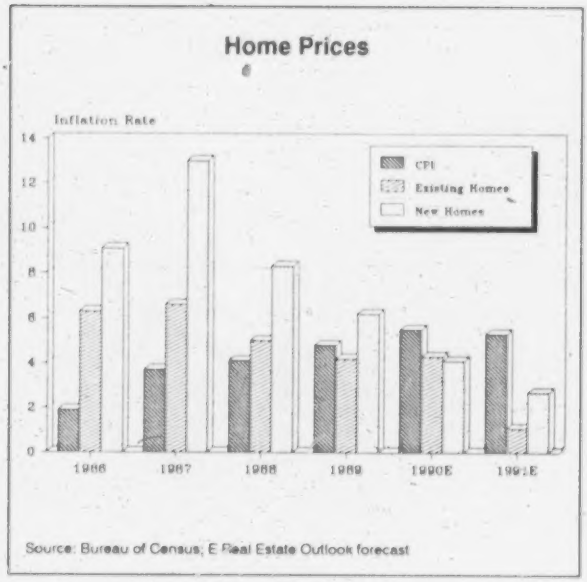
	Median		Average	
	Existing	New	Existing	New
Jul 1989	95,200	116,000	121,000	140,300
Feb 1990	95,200	125,200	118,300	150,900
Mar 1990	96,300	119,400	119,500	144,600
Apr 1990	95,600	130,000	117,800	153,400
May 1990	95,600	125,900	118,700	150,700
Jun 1990	97,500	127,000	121,100	152,100
Jul 1990	***98,400***	***121,000***	***121,000***	***150,500***
Annual Averages:				
1988	89,200	113,400	112,500	138,900
1989	92,900	120,400	118,000	148,300
Percent changes in July 1990 since:				
Jul 1989	3.4	4.3	0.0	7.3
Jun 1990	0.9	-4.7	-0.1	-1.1

Regional Data

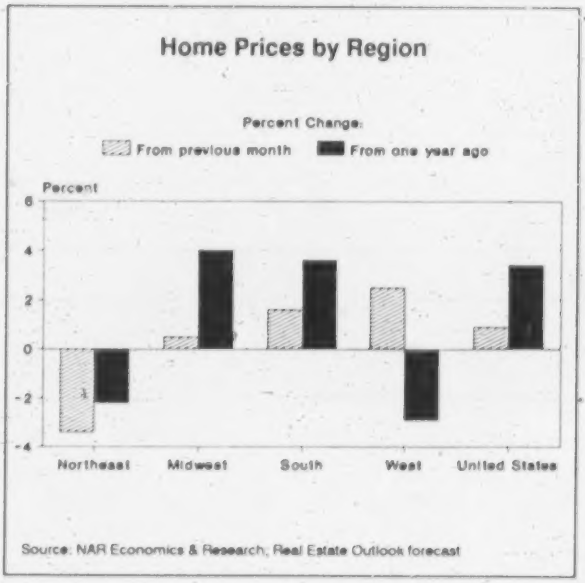
Median Prices for Existing Single-Family Homes

	Northeast	Midwest	South	West
Jul 1989	146,500	73,400	85,800	145,700
Feb 1990	143,400	74,100	85,200	143,300
Mar 1990	148,800	73,500	86,000	141,800
Apr 1990	140,700	75,300	85,900	137,600
May 1990	141,300	73,500	85,100	141,800
Jun 1990	148,300	75,900	87,500	138,100
Jul 1990	***143,300***	***76,300***	***88,900***	***141,500***
Annual Averages:				
1988	142,500	68,200	82,200	124,700
1989	145,100	71,200	84,400	139,800
Percent changes in July 1990 since:				
Jul 1989	-2.2	4.0	3.6	-2.9
Jun 1990	-3.4	0.5	1.6	2.5

Source: National Association of Realtors
Economics and Research Division



Source: Bureau of Census; E Real Estate Outlook forecast



Source: NAR Economics & Research, Real Estate Outlook forecast

The median prices of existing and new single-family homes took divergent paths in July, with the price for existing homes rising 0.9 percent, or $900, and that for new homes falling 4.7 percent, or $6,000. Both measures have gained ground over the past year, however. The existing home price in July stood at $98,400, 3.4 percent above its July 1989 level. The price for new homes gained 4.3 percent over the period and came in at $121,000 in July. Both increases came during a period of weakness in the housing markets, when prices on individual homes are less likely to be rising. This suggests that the composition of homes being sold is changing -- the ratio of high-priced homes to low-priced homes is rising, forcing the median price up.

The average price for existing homes gained no ground in the past twelve months, returning in July to the $121,000 level it stood at a year ago. The average price of a new home, meanwhile, has risen steeply, gaining $10,200, or 7.3 percent.

The forecast calls for the median price on existing homes to be $96,900 in 1990 and $98,000 in 1991, yielding growth rates for the two years of 4.3 percent and 1.1 percent, respectively.

Robert D. Barr
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AUCTIONS VERSUS PRIVATE SALES OF HOUSES: A DESCRIPTION AND EMPIRICAL ANALYSIS OF THE MELBOURNE, AUSTRALIA MARKET - PART 1

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INTRODUCTION

In most real estate markets, including those in the United States, a large majority of non-distress sales of residential properties occur as a result of private negotiations. Scotland is an exception, as the use of sealed bids dominates there, as is Australia, notably Melbourne, where the English auction system (open, ascending bids) coexists with private sales. The percentage of residential properties sold at auction in Melbourne has increased during the past decade, and most rapidly between 1983 and 1989. Though statistics on the incidence of marketing systems are not available in aggregate, real estate advertising in newspapers suggests that about 50% of detached houses were listed for sale by auction in Melbourne in 1988, compared to about 25% in 1983. Of those listed for auction in 1988, most were sold that way. The others were sold by private sale either prior to the auction date, or after the auction if the reservation price had not been met.

The incidence of auctions in Melbourne varies among spatial submarkets. Historically, auctions have been favored in the more affluent inner city suburbs, with the highest percentage occurring within six miles of the central business district. However, the percentage of properties listed for sale by auction is also increasing in less affluent submarkets.

The mechanics of an auction sale are straightforward. The listing agreement specifies the date of the auction, which is generally four to five weeks from the listing date, an advertising schedule and associated costs, which the seller pays, the reservation price, which may be changed, and the commission agreement. Commissions on residential properties are based on a sliding percentage of the selling price, but are effectively 2% plus $660. They are the same for auctions and private sales. Between the dates of the listing and the auction, subagents (salespersons) and agents (brokers) perform duties similar to those that would accompany a private sale. The property is advertised, shown to prospective buyers, often by open house, and those individuals potentially most interested are contacted periodically. On some occasions, the agent will entertain offers for a private sale before the auction.

The auction is generally held at the property, and is conducted by an auctioneer paid a fee by the agency for his services, or more commonly by an agent or subagent of the listing firm. The skills required tend to limit those qualified and interested in auctioneering, and there is a measure of status afforded auctioneers within the industry.

If a bid exceeds the seller's reservation price, the property is sold with a 10% deposit and the balance due at settlement, which is typically 60 days from the date of the sale. The sales contracts that result from auctions almost never contain contingency clauses.

The conventional wisdom, widely held among market participants and agents, is that auction sales tend to produce higher prices than do private sales, particularly in active markets and within higher priced submarkets. This proposition has not been empirically tested.

INSTITUTIONAL FRAMEWORK

Melbourne is a city of approximately 3,000,000, located on the Southeast coast of Australia in the state of Victoria. Melbourne is Australia's second largest city, and is composed of 55 local government authorities.

Melbourne's housing is dominated by single-family detached dwellings (76%), with an ownership rate of 73%. There is steady turnover, but perhaps not at a rate as high as in growing American cities of similar size. Approximately 7% of single-family dwellings were sold in 1988, and in 1988, 48% of Melbourne's population over the age of five were not in the same dwelling as they were in 1983.

Residential development has tended to strongly favor the South and East sectors of Melbourne, due in part to geography -- the South and East tend to be cooler, wetter, and have better soil -- and to public transportation facilities that favor the South and East. The most affluent suburbs are in the South and East, and this is where the highest percentage of auction sales occur.

The median price of a house in Melbourne has risen from $37,000 in 1977 to $110,000 in 1988. Percentage increases have been unevenly distributed, ranging from about 100% in the lower price ranges to 300% + in the upper. The larger

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increases have tended to occur in the inner to middle eastern suburbs.

The Agency (Brokerage) Business in Melbourne

The residential agency business in Melbourne operates much the same as in similar sized American cities. Prior to 1956, there was little control of agents' activities. In that year, the Victoria government passed the Estate Agents Act which set commission rates and mandated pre-licensing education for agents through courses and seminars delivered by the Real Estate Institute of Victoria (REIV). The REIV is the Australian equivalent of a state association of Realtors® in the United States. Commission rates are set by the State, and are currently based on a sliding scale (as a function of price). Except for properties in the lowest price ranges, the sliding scale converts to 2% of the selling price plus $660. This relatively low commission structure helps explain the fact that in Melbourne there are fewer subagents, agents, and agencies than in American cities of comparable size.

There are currently no educational requirements for subagents, though such legislation is now being considered. Given the lack of the licensing barrier-to-entry, and the relatively low commission scale, agencies are more conservative than their American counterparts so far as hiring practices. As a result, the association between the number of active licensees and activity cycles in the market is not as strong as in the United States.

Training of salespersons is for the most part in-house, or through seminars conducted by state real estate institutes. Auctioneering is learned through Institute seminars and by serving as an apprentice within an agency or agencies.

While there are some differences in the administration of auctions and private sales, the law in Australia is such that there are fewer legal issues than one might imagine. This is because the law with respect to the agent-seller and agent-buyer relationships remains much more closely aligned with the traditional view that the agent represents the seller. This is unlike the United States, where court precedents have moved toward the view that agents have substantial responsibilities to the buyer. The difference is important with respect to auctions, because any information given to the agent by prospective bidders about their degree of interest or the maximum price they may bid can be used to the bidder's detriment at auction.

Reliable data are not available on which to base a comparison of earnings of subagents and agents in Melbourne and similar cities in the United States. Some information is available in the most recent survey conducted by the Real Estate Institute of Australia (Australia's NAR). In 1986, the average total commission generated per subagent ranged from $65,280 in "smaller" agencies to $83,861 in "larger" agencies. These figures include all types of properties and the contributions of agents. Commission agreements between agents and subagents are a matter of private negotiation, but the portion flowing to the subagent tends to be marginally lower in Australia than in the United States. A survey of seventeen Melbourne agents produced a range of 30%-42% of the total commission going to the subagent, with 50% for listing and 50% for selling a common breakdown.

There may also be a further division (again, often 50%-50%) of the listing commission between the lister and the "manager" of the listing. The manager is responsible for duties such as showing the houses and arranging for open houses. Most often the listing subagent also manages.

Compared to the United States, multiple-listing tends to be an unimportant market factor. It is voluntary, is used only for private sales (not auctions), and tends to be a dumping ground for difficult to sell properties. As a result, in reasonably active markets a very small portion of properties are sold by other than the listing agency. The listing agreement between seller and agent also differs as a function of whether it is a listing for sale by auction or for sale privately. Private listings specify sole agency (or in a small percentage of cases, multi-list), and are for 60 days. This time period is legislated. If the property is unsold at the end of 60 days, the sole agency converts to an open listing. If the listing is for multi-list, it lapses. When any listing agreement expires, there is intense competition among firms to sign another listing agreement.

For sale-by-auction listings, legislation requires the auction be held no longer than 45 days from the listing date. If the property is not sold at the auction, the agency retains the sole rights for an additional 30 days, during which time the property is marketed privately. At the end of the 30 day post-auction period, the listing automatically converts to an open listing, unless it is cancelled by the seller. In most cases, the listing is cancelled. Agents and subagents spend their time much as they do in the United States, especially for private listings. Auction listings tend to generate more open houses than do private listings, and require somewhat more paperwork prior to the sale. The sale itself is of course different. The auction is conducted by an auctioneer who is either retained on a fee basis ($100-$200 is a common fee for a house auction) or more commonly, by an agent or subagent of the listing/selling firm. The auction itself is considered part of the service provided by the firm, and the subagent's commission is not affected. Currently there are no legislated requirements to become an auctioneer. In fact,

auctioneers need not be licensed agents, though most are.

Some Important Auction Institutions: There are four institutions associated with auction sales in Australia that are thought by market observers to be most important with respect to the incidence and distribution of auctions, their chances of success, the prices brought, and ultimately the profits of agents. These are 1) unconditional contracts, 2) seller bids, 3) reserve prices, and 4) seller-paid advertising.

Unconditional Contracts: Market and Social Issues: A conditional auction sale is a rare exception. While most agents could recall such sales, they clearly represent less than 1% of the total. The main reason is that at auction there must be agreement on the bundle of rights being bought and sold, and this is difficult if there are contingencies specific to individual buyers or the seller. Contingencies, for example for financing, do appear in a significant percentage of private sales contracts in certain Melbourne submarkets. However, in the higher priced markets where auction sales are relatively more popular, contingencies are also rare in private contracts.

With respect to financing, which is the most common (and arguably most important) contingency in the United States, the majority of successful auction bids are made without a formal commitment. There is generally an informal understanding with a lender that a certain percentage of the purchase price will be provided. While unusual, there are cases (agents estimate 1%-3%) when financing cannot be arranged after a successful bid. When that occurs, the 10% deposit becomes a liquidated damage, and the property is typically put back on the market for private sale. The author discussed auction-sale financing with five lenders. All made loans based on the auction price, and all admitted to varying degrees of concern that auction prices may or may not reflect "true" market values. This concern may help explain the socio-economic distribution of auctions, as the willingness of lenders to commit to a loan (formally or informally) based on a to-be-determined auction price may be associated as much with the borrower's financial capacity as with the collateral's value. Thus the loan takes on more of the characteristics of a credit loan than does a loan based on appraised market value. This favors middle to upper income buyers. In addition, middle to lower income buyers are likely less willing to risk the loss of deposit should financing be unobtainable. The risk is not only that a loan may be unobtainable, but also if obtained, the amount may be less than anticipated, and the lower income purchaser is less likely to have the shortfall available.

Finally, though no lender was willing to confirm this, some market observers claim that a major reason lenders are less willing to lend based on auction prices in certain markets is that they perceive a positive association between lower income and the probability of overbidding. In sum, because higher income bidders are more likely to be able to arrange financing, and are in a better position to take the risks associated with bidding without financing in place, there is concern that the auction system systematically excludes certain portions of the population.

Other potentially discriminating elements of auction sales in Melbourne are language difficulties and a lack of information about the mechanics of auctions. The perception that auctions effectively exclude a portion of the public is the major reason the Victoria Ministry of Housing, which provides low interest financing for low income buyers, does not do so for houses purchased at auction.

Seller Bids: Easily the most controversial institution in Australian auction markets is the use of vendor (or seller or "dummy") bids. They are legal and routinely used, and the auctioneer reminds the attendees of this fact just prior to the start of bidding. Seller bids may be made by plants in the crowd or "off the wall" by the auctioneer. Some agents employ "bidders" who follow them from auction to auction. This is usually done by inexperienced auctioneers uncomfortable with simply calling out fictitious bids. Agents claim that while vendor bids are not always used, they are needed in certain circumstances to stimulate the auction process. For example, if there is only a single bidder, there must be a market mechanism which allows that bidder to reach his or her reservation price, which from the seller's perspective will hopefully meet or exceed his or her reserve price.

Those opposed to the use of seller bids make two points. First, if there is only a single legitimate bidder, there is in fact no auction. In such a case, the "proper" marketing mechanism is a privately negotiated price. Second, it is argued that seller bids introduce a deception into the process which can induce a higher bid than would be the case otherwise. It is claimed that this is particularly damaging because in many cases the agent has insight into a bidder's level of interest, and perhaps even knowledge of the maximum price the bidder is willing to pay, and that this can be taken advantage of through seller bids.

The public position of agents is that while vendor bids lubricate the auction process, they do not distort average outcomes. Privately, some will admit that they feel seller bids sometimes produce higher prices than would have been obtained otherwise. It is also true that a percentage of auctions have only a single serious bidder, and that

without seller bidding these properties would be "passed in" and later sold privately. If nothing else then, the reported percentage of successful "auctions" is overstated in the sense that some portion of these sales do not result from competitive bidding among prospective buyers.

A final point is that while in most cases there is less incentive to make a seller's bid once the reserve price has been met, there is nothing to prevent such a bid, and according to agents, such bids are occasionally made when there is a feeling it will lead to even higher bids.

While there are strongly held opinions on both sides, there is no empirical evidence as to the pricing effect of seller bids, and it is an institution with characteristics that are not amenable to testing. The legality of such bids, as in Australia, is likely to be a function of political and social pressures rather than economic substance. It is the author's opinion that seller bids can and do affect some prices. It should be pointed out that the use of seller bids is not confined to property markets; other examples are auctions of wine and art.

Reserve Prices: All property auctions in Melbourne are with reserve. The reserve price is not public information, and may be changed at any time prior to and during the auction. It is sometimes the case that the auction will produce more spirited bidding than anticipated, and the original reserve will be raised during the bidding. In effect, an auction with reserve gives the seller the right to reject any and all bids. That sellers use reserve prices seems common sense. Just as it would not be rational to force a seller who is selling privately to accept the highest offer made by a certain date, it does not seem rational for a seller by auction to necessarily accept the highest bid made at the auction. This is particularly true given the vagaries of auction sales, such as the illness of a major prospect(s), the weather, competing auctions, and so on.

Seller-Paid Advertising: As noted earlier, commissions are state-regulated in Australia, and in Melbourne, are effectively 2% of the selling price plus $660. This rate applies to both auctions and private sales.

The author's casual survey of practice in the United States suggests that commissions here are higher for auctions than for private sales. This may reflect the fact that the administration of an auction sale is more time consuming (more paperwork and open houses) than for private sales, and/or that unlike in Australia, brokers in the United States tend to pay advertising costs.

Discussions with Australian agents indicate that they view the institution of seller-paid auction advertising to be an important element in the relative success of auctions. This is not only because the costs are borne by the seller and there is the potential for profiting from advertising discounts, but also because if agents paid for advertising, the expectation is that advertising budgets would decrease, thereby reducing either the probability of successful sales and/or selling prices. Agents also feel the institution of seller-paid advertising sends a signal to the market that the seller is serious.

THE INCIDENCE AND DISTRIBUTION OF AUCTIONS IN MELBOURNE

Data on property transactions are difficult to obtain, particularly with respect to the frequency, geographic distribution, and success rate of auctions. The use of multi-list is limited, and excludes auction listings. Individual agencies are reluctant to share information about auction outcomes, especially those that are unsuccessful. There is also a reluctance by the industry to share aggregate data, as it is felt that the ratio of successful to unsuccessful auctions is a leading indicator of the direction of the market, and this is information they would prefer to keep private. While the reporting system is voluntary, and there is still a bias against reporting unsuccessful auctions, it is the opinion of most observers that the ratio of reported successful to unsuccessful sales, as well as the reported ratios of houses sold at auction to those sold before and after auction, are reliable indicators of the directions of change.

Agencies are also reluctant to divulge ratios of private to auction listings. While agencies often encourage sellers to choose auction marketing, in most submarkets private listings still dominate, and therefore agencies do not dwell on the ratio. There is some evidence that those in the industry tend to overestimate the percentage of auctions; the ratios of newspaper advertisements for private versus auction sales tend to be higher than the ratios quoted by agencies. The advertising ratios are considered the only reasonably reliable data on the frequency and geographic distribution of auctions.

Maher's Studies: The largest and most influential newspaper in Melbourne, the AGE, carries the bulk of real estate advertising, and since 1981, it has printed relatively complete results of each week's auctions as reported by the individual agencies. Professor Chris Maher of Monash University, Melbourne, has completed the only systematic studies of auction frequency, distribution, and success, as well as surveys of housing market participants with respect to their perceptions of the auction system. His work uses the advertising in the AGE as a proxy for marketing type (private versus auction) and the results of auctions reported in the AGE as the measure of auction success. It is partly through his efforts that both the percentage of agencies that report results, and the credibility of

those reports, have increased markedly over the past several years.

Explaining the Increased Incidence of Auctions: Perceptions of Market Participants: Maher surveyed the sellers, buyers, and agents of all of the 539 properties listed in the auction results section of the AGE for October 4, 1986. Usable responses were received from 108 of the sellers, 131 of the buyers, and 49 of the agents.

Seller Responses: Sellers were asked, in an open-ended question, why they had chosen to auction their houses. More than one reason was allowed. Table 1 shows the results, tabulated both by the percentage of total responses (Column 1) and by the percentage of respondents who offered a particular reason (Column 2). Three reasons dominate. The advice of the agent is most important, followed by the perception that an auction will achieve the best price, then that an auction reduces the uncertainty about time on the market.

A surprise is the relative lack of importance assigned to the unconditional sales contract. This may reflect the fact that in those areas where auctions dominate, contingencies are uncommon even in contracts for private sales. The estimates of seventeen agents interviewed by the author ranged from a low of less than 1% to a high of 3% of private sales contracts with contingencies. This range has been more or less constant during the past several years. Therefore, the fact that sellers did not list a lack of contingencies as an important factor in choosing auctions as opposed to private sales should not be interpreted as meaning contingencies do not matter. In a separate question which asked the sellers to list the advantages of auctions, the rankings were much the same as those in Table 1. However, the unconditional contract was mentioned by 13.4%.

Sellers were also asked about the disadvantages of auctions. The results are shown in Table 2. The most frequent responses relate to the costs of advertising, the chance of failure, and the stress of an auction. When Maher asked if they would use auctions again, 76% answered affirmatively. Not surprisingly, those whose properties had sold at auction were more positive (92% would use an auction again) than those whose properties had not sold (60%).

When the sellers were asked if they would buy at an auction, 57% answered yes, 20% no, and 23% were unsure. A comparison to the 76% who would sell again by auction seems to strengthen the perception that auctions favor sellers. It must be remembered however, that this sample was not random; it is of individual sellers who originally chose to auction and who did so because they thought it would bring a higher price. Thus, it is not surprising this group would be less enthusiastic on the demand side.

Buyer Responses: Buyers were also asked what they perceived to be the advantages and disadvantages of auctions. Their responses are shown in Tables 3 and 4. Buyers, like sellers, hope for the best. However, Maher noted that even buyers who hoped to get a bargain placed a low probability on that outcome. He asked an additional question of respondents (not shown in Table 3) and found that almost 37% of buyers saw no advantage in buying at auction, and only about 13% thought an auction provided a true market price. It is not surprising therefore, that Table 4 shows that the most frequently mentioned disadvantages are related to the possibility of paying "too much"; one institution associated with perhaps paying too much is the practice of "Dummy (Vendor) Bidding." Finally, a comparison of Tables 2 and 4 shows that buyers and sellers roughly agree on the importance of stress, and that the unconditional contract is mentioned as a disadvantage by buyers with about the same frequency as it is mentioned as an advantage by sellers.

Agent Responses: The number of responses to Maher's survey of agents was relatively low (49 responses), but this is partially explained by the fact that individual agents were involved in more than one transaction.

Tables 5 and 6 show the agents' rankings of auction advantages and disadvantages. The results tend to confirm expectations, and are consistent with the perceptions of the author based on interviews with agents.

Agents value an unconditional contract much more highly than do sellers. This may reflect the fact that the burden of insuring that buyers make good faith efforts to fulfill contingencies tends to fall on the agent.

With respect to the pricing impact of auctions, the responses are difficult to interpret; 41% of the agents said that auctions produce true market prices, while 22% said that auctions produce maximum prices. The problem is that these responses are not necessarily mutually exclusive. If agents subscribe to a definition of market value that references the "highest price" obtainable, there is no difference.

Assuming that the maximum price is considered the true value by most agents, there is consistency among the responses of sellers, buyers, and agents. The percentages who felt auctions produced the highest or maximum price were 39.2%, 47.3%, and 40% respectively, while only a small percentage of sellers and agents thought auctions might produce a lower price. Further, as noted above, though a

TABLE 1
SELLERS: REASONS FOR CHOICE OF AUCTION

	Reason Given	Percent of Responses (%)	Percent of Respondents (%)
1.	On agent's advice	28.5	43.0
2.	Means to achieve best price	19.9	30.0
3.	Quick, definite date	19.2	29.0
4.	Auctions are usual in area	5.3	8.0
5.	Special character of house or location	5.3	8.0
6.	Creates more interest in property	4.6	7.0
7.	Gives fair market value	4.0	6.0
8.	Auction contract is unconditional	3.3	5.0
9.	Offers more than one chance for sale	2.6	4.0
10.	Failed to sell privately	2.6	4.0
11.	Advertising is more effective	2.0	3.0
12.	Other reasons	2.7	4.0

TABLE 2
SELLERS: PERCEIVED DISADVANTAGES OF AUCTIONS

1.	Vendor pays advertising costs	23.1	37.3
2.	Auctions are stressful	19.4	31.3
3.	Risk of auction falling through	11.2	18.1
4.	Pressure from agents	10.4	16.9
5.	Problems on day (e.g., rain)	10.4	16.9
6.	Lack of privacy	9.7	15.7
7.	Strain of presentation	4.5	7.2
8.	Forces seller's hand	3.0	4.8
9.	No disadvantages	2.2	3.6
10.	Other	5.9	9.6

TABLE 3
BUYERS: PERCEIVED ADVANTAGES OF AUCTIONS

1.	Might get a bargain	32.3	37.8
2.	None	31.5	36.9
3.	Sets a true market price	10.8	12.6
4.	Opportunity to gauge interest	7.7	9.0
5.	Certainty of sale	6.2	7.2
6.	Buyer can get upper hand if prepared	4.6	5.4
7.	Opportunity/investment	3.8	4.5
8.	Specific date	3.1	3.6

TABLE 4
BUYERS: PERCEIVED DISADVANTAGES OF AUCTIONS

		Percent of Responses (%)	Percent of Respondents (%)
1.	Competition may force buyer to pay more	26.0	47.3
2.	Dummy bidding	22.1	40.2
3.	Tension/stress	12.3	22.3
4.	Uncertainty of price	12.3	22.3
5.	Pressure may cause mistakes	7.8	14.3
6.	Unconditional contract	7.4	13.4
7.	No cooling off period	5.9	10.7
8.	Timing can rule out bidding	2.9	5.4
9.	Lack of privacy	2.5	4.5
10.	No disadvantages	1.0	1.8

TABLE 5
AGENTS: PERCEIVED ADVANTAGES OF AUCTIONS

1.	Unconditional sale/contract	19.7	55.1
2.	Sets true market price	14.6	40.8
3.	Ensures vendor is genuine	9.5	26.5
4.	Auctions maximize price	8.0	22.4
5.	Creates greater interest/exposure	7.3	20.4
6.	Price undisclosed	6.6	18.4
7.	No cooling off period	6.6	18.4
8.	Pressures buyer to make decision	5.1	14.3
9.	Concentrated, more effective advertising	4.4	12.2
10.	Auctions are quick and decisive	4.4	12.2
11.	Other	14.0	38.7

TABLE 6
AGENTS: PERCEIVED DISADVANTAGES OF AUCTIONS

1.	None	9.7	38.8
2.	Additional costs/advertising	9.4	12.2
3.	Program too long/demanding	7.8	10.2
4.	Excludes buyers unable to bid unconditionally	7.8	10.2
5.	Some sellers set unrealistic reserve	7.8	10.2
6.	Possible failure of auction	6.3	8.2
7.	Not suited to high volume stock	4.7	6.1
8.	Other	25.8	34.4

Source: Chris Maher, "For Whom the Hammer Falls," June 1988; "Information, Intermediation and Sales Strategy in an Urban Housing Market," Summer, 1989; "Attitudes, Outcomes and Implications of Residential Auctions," Monash University, Melbourne, 1989.

relatively high percentage of buyers (38%) hoped to get a bargain, they assigned a low probability to that outcome.

The most striking difference among the responses of agents, sellers and buyers is that almost 39% of agents saw no disadvantages in auctions, compared to 3.6% of sellers and 1.8% of buyers. This reflects both the strong bias of the industry toward auction sales, and the gap between the public position of the real estate industry and the perceptions of buyers and sellers. An additional question asked of agents was how they would improve the auction system. The most frequent response (51.6%) was that the professional standards of auctioning should be elevated. The second most frequent response (19.4%) was that the public needs to be educated about the auction system.

Comments on the Survey Results: The author's personal observations of the market, and what was learned from interviews with agents, suggest that while in general Maher's survey results can be trusted, that is less the case for agents than for sellers and buyers. This is because the public positions of agents may differ from their private positions, particularly with respect to whether auctions produce "true value" or something more.

The most important omission in Table 5, which lists the agents' perceptions of auction advantages, is the fact that auctions are more profitable to agents than are private sales. In private discussions, this emerged as the most important consideration. Not only does the agent on average save the one-quarter percent that is paid by the agent to advertise a private sale, but there is potentially a greater savings through advertising discounts. Based on volume, an individual agency may claim discounts of up to 40% per year. Sellers pay retail while agencies pay wholesale, and the difference can be an end-of-year profit to the agency. (While the consensus of legal opinion is that it is not permissable for the agent to retain the retail-wholesale price difference on an individual transaction, if all advertising is placed through the agent's account, it may be permissable for the agent to claim the difference on an aggregated, annual basis). Given that commissions are 2% + $660,

40% of the average of 1% of the selling price that is spent on auction advertising effectively adds about 15% to the commission.

A second important omission from the list of agents' perceptions of auction advantages is that agents see auctions as a way of "disciplining" unrealistic sellers. An unsuccessful auction sends a message with respect to the seller's reserve price, and a failed auction is a strong incentive for a seller to rethink his or her position. Agents point to this as the main reason that a high percentage of houses that are not sold at auction are sold privately shortly thereafter. Because agents prefer auctions and let that preference be known to sellers, it is not surprising that "disciplining sellers" did not appear as an advantage in a survey for public consumption.

The role of the 1983 Land Sale Act legislation, which in part exempted auction sales from the three-day "cooling-off" period, is commonly thought of as a factor which explains their increased popularity. However, only 5.2% of sellers mentioned this as an advantage of auctions, only 10.7% as a disadvantage by buyers, and only 18.4% as an advantage by agents. This is puzzling, as it is difficult to assign the rather sudden increase in auctions that followed the 1983 legislation to other factors. One possibility is the shifting of the title search burden to the seller through the same legislation. While that was not mentioned as an advantage of auctions in the surveys, it is also true that providing good title is required of the seller regardless of the marketing method.

Another explanation for the post 1983 increase in auctions is that the market became active at about that time, with a concurrent increase in price. This is the type of market environment in which auctions tend to be favored. However, there was little difference in the median priced house sold in Melbourne between January 1983 and January 1988. At that point, the market did become extremely active and prices rose sharply through March of 1989. While the percentage of auctions did jump from January 1988 through March 1989, the continuous increase since 1983 is not explained.

The agents interviewed by the author were of almost unanimous opinion that the 1983 legislation, including both the cooling off period and the placing of the title search burden on the seller, was in fact the catalyst for the increased percentage of auction listings, and that this trend was reinforced by market conditions in the late 1980's.

U.S. Economic Outlook: September 1990

	90.1	90.2	90.3	90.4	91.1	91.2	91.3	91.4	1988	1989	1990	1991	1992
U.S. Economy													
Annual Growth Rate													
Real GNP	1.7	1.2	1.3	-1.4	-1.1	0.0	1.5	2.4	4.5	2.5	1.1	0.0	2.4
Industrial Production	0.6	4.0	1.7	-2.4	-2.6	-1.3	1.9	2.8	5.4	2.6	1.0	-0.5	2.9
Civilian Employment	1.0	0.7	-0.7	-1.1	-0.5	-0.5	0.0	0.5	2.3	2.0	0.6	-0.4	0.8
GNP Inflation Index	4.8	4.7	6.0	4.0	5.3	3.8	3.7	3.6	3.3	4.1	4.4	4.5	3.8
Consumer Prices	8.1	3.7	6.5	7.3	5.4	4.2	4.3	4.1	4.1	4.8	5.5	5.3	4.3
Value of the U.S. Dollar	-16.0	-2.0	-22.6	-7.2	-8.9	-1.4	0.3	1.6	-4.3	6.2	-9.2	-7.0	1.7
Percent													
Mfg. Capacity Utilization	82.6	82.7	82.5	82.2	81.2	80.4	80.2	80.1	83.9	83.9	82.5	80.5	80.2
Civilian Unemployment	5.3	5.3	5.5	5.9	6.2	6.5	6.6	6.7	5.5	5.3	5.5	6.5	6.6
Percent of GNP													
Federal Tax Receipts	20.1	20.2	20.2	20.2	20.2	20.1	20.0	20.0	20.0	20.2	20.2	20.1	20.6
Federal Expenditures	23.2	23.2	22.9	22.9	23.0	23.0	22.9	22.7	22.9	22.8	23.0	22.9	22.3
Federal Budget Deficit	-3.1	-3.0	-2.7	-2.7	-2.8	-2.9	-2.8	-2.6	-2.9	-2.6	-2.9	-2.8	-1.7
Interest Rates, Percent													
Federal Funds Rate	8.3	8.2	8.1	7.7	7.4	7.4	7.4	7.4	7.6	9.2	8.1	7.4	7.4
3-Month T-Bill Rate	7.8	7.7	7.5	7.3	7.0	7.0	7.0	7.0	6.7	8.1	7.6	7.0	7.0
Prime Rate	10.0	10.0	10.0	9.9	9.5	9.3	9.3	9.3	9.3	10.9	10.0	9.3	9.4
Discount Rate	7.0	7.0	7.0	6.7	6.5	6.4	6.3	6.3	6.2	6.9	6.9	6.4	6.3
Corporate AAA Bond Yield	9.2	9.4	9.5	9.3	9.2	9.1	9.0	9.0	9.7	9.3	9.4	9.1	8.9
30-Year Government Bond Yield	8.4	8.7	8.8	8.5	8.4	8.3	8.2	8.2	9.0	8.4	8.6	8.3	8.1
Mortgage Rates, Percent													
30-Year Fixed Rate	10.1	10.3	10.2	10.1	10.1	10.0	9.9	9.8	10.3	10.3	10.2	9.9	9.5
1-Year Adjustable	8.4	8.6	8.4	8.3	8.3	8.3	8.3	8.2	8.5	9.3	8.4	8.3	8.1
Home Sales & Starts													
Thousands													
Total Single-Family Sales (Single-family resales plus 97% of single-family starts)	4,474	4,186	4,132	4,031	4,052	4,030	4,091	4,152	4,648	4,446	4,205	4,081	4,266
Existing Single-Family Sales	3,423	3,319	3,291	3,207	3,214	3,189	3,223	3,257	3,594	3,467	3,310	3,221	3,329
New Single-Family Sales	592	543	535	531	527	524	528	534	676	654	550	528	550
Housing Starts	1,454	1,200	1,159	1,134	1,160	1,171	1,210	1,254	1,491	1,386	1,237	1,199	1,332
Single-Family Units	1,083	893	866	849	864	867	895	923	1,086	1,010	923	887	966
Multi-Family Units	371	307	292	284	296	304	316	332	405	377	314	312	365
2-4 Family Units	43	42	40	39	40	42	43	45	59	55	41	43	50
5+ Family Units	328	265	252	246	255	262	272	286	347	321	273	269	315
Mobile Homes Shipped	196	190	188	177	183	183	188	192	218	199	188	187	199
Percent change - Year Ago													
Total Single-Family Sales	-2.3	-2.7	-6.3	-10.3	-9.4	-3.7	-1.0	3.0	0.4	-4.3	-5.4	-2.9	4.5
Existing Single-Family Sales	-3.5	-0.6	-4.4	-9.3	-6.1	-3.9	-2.1	1.6	2.4	-3.6	-4.5	-2.7	3.4
New Single-Family Sales	-5.6	-13.7	-22.9	-18.4	-10.8	-3.3	-0.5	2.8	0.8	-3.3	-15.8	-4.0	4.1
Housing Starts	-0.3	-11.4	-13.4	-15.9	-20.2	-2.4	4.5	10.6	-8.6	-7.0	-10.8	-3.0	11.1
Single-Family Units	0.2	-9.9	-12.9	-14.1	-20.2	-2.9	3.3	8.6	-5.9	-7.0	-8.6	-3.9	8.9
Multi-Family Units	-1.6	-15.3	-14.6	-20.9	-20.4	-1.0	8.0	16.6	-14.9	-7.1	-16.7	-0.7	17.3
2-4 Family Units	-2.7	-21.2	-28.6	-27.0	-6.7	-1.0	8.0	16.6	-10.0	-5.7	-25.9	3.8	17.3
5+ Family Units	-1.4	-14.2	-11.9	-19.8	-22.2	-1.0	8.0	16.6	-15.7	-7.3	-15.1	-1.4	17.3
Median Home Prices													
Thousands of Dollars													
Existing Home Prices	95.9	96.2	97.6	97.9	97.4	97.7	98.3	98.7	89.2	92.9	96.9	98.0	100.4
New Home Prices	123.2	127.6	124.6	126.0	126.3	127.8	129.5	131.2	113.4	120.4	125.4	128.7	132.7
Percent Change - Year Ago													
Existing Home Prices	5.2	3.5	2.8	5.6	1.5	1.5	0.7	0.8	5.0	4.2	4.3	1.1	2.4
New Home Prices	4.4	6.8	4.2	1.3	2.5	0.1	3.9	4.1	8.3	6.2	4.1	2.7	3.1

Source: Forecast produced using Laurence H. Meyer & Associates' model of the U.S. economy
Assumptions and simulations by Dr. John Tuccillo and Robert Barr.

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